



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Alex Chenchik

Serial No.: 10/658,632

Filed: 9/8/03

For: METHODS FOR GENE
FUNCTION ANALYSIS

§
§
§
§
§
§
§
§
§
§

Confirmation No.: 6082

Group Art Unit: 1645

Examiner: Unknown

MAIL STOP DD
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING
37 CFR 1.8

I hereby certify that this correspondence is being deposited on
February 17, 2004 with the United States Postal Service as First
Class Mail in an envelope addressed to: Commissioner for
Patents, P.O. Box 1450 Alexandria, VA 22313-1450.

2/17/04
Date

Esther Marques
Esther Marques

Dear Sir:

INFORMATION DISCLOSURE STATEMENT

The Applicants, and the Attorney who signs below on the basis of the information supplied by the inventor and the information in his file, submit herewith patents, publications, or other information of which they are aware, which may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR § 1.56. ✓

While the information submitted in this Information Disclosure Statement may be material pursuant to 37 CFR § 1.56, it is not intended to constitute an admission that any patent, publication or other information referred to therein is prior art for this invention unless specifically designated as such.

In accordance with 37 CFR § 1.97, this Information Disclosure Statement is not to be construed as a representation that a search has been made or that no other possibly material information as defined under 37 CFR § 1.56(a) exists.

The patents and/or publications submitted herewith are set forth on the attached Forms PTO-SB8A AND SB8B.

While we believe that no fee is due, if the sum of \$180.00 is due under 37 CFR § 1.17(p) pursuant to § 1.97, the Commissioner is hereby authorized to charge this fee, and any other fee necessary to make this submission timely, to the Deposit Account No.: 20-0782 (Order No. SBIO/0002/SB).

Respectfully submitted,



Sarah J. Brashears
Registration No. 37,087
MOSER, PATTERSON & SHERIDAN, L.L.P.
3040 Post Oak Blvd. Suite 1500
Houston, TX 77056
Telephone: (650) 330-2310
Facsimile: (650) 330-2314
Attorney for Applicant(s)

Please type a plus sign (+) inside this box →



PTO/SB/08a (08-03)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 5

Application Number	10/658,632
Filing Date	9/8/03
First Named Inventor	Alex Chenchik
Group Art Unit	1645
Examiner Name	Unknown
Attorney Docket Number	SBIO/0002/SB
Submission Date	February 17, 2004

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	A1	US-2001/0008771-A1	07/19/2001	Seibel et al.	
	A2	US-2002/0086356-A1	07/04/2002	Tuschle et al.	
	A3	US-2002/0162126-A1	10/31/2002	Beach et al.	
	A4	US-2003/0224055-A1	12/04/2003	Lewis et al.	
	A5	US-2003/0224345-A1	12/04/2003	West et al.	
	A6	US-2003/0224432-A1	12/04/2003	Myers et al.	
	A7	US-6,489,127-B1	12/03/2002	Exelixis, Inc.	
	A8	US-6,506,559-B1	01/14/2003	Carnegie Institute of Washington	
	A9	US-6,506,604-B2	01/14/2003	Cell Genesys, Inc.	
	A10	US-6,518,035-B1	02/11/2003	Rosetta Inpharmatics, Inc.	
	A11	US-6,573,099-B2	06/03/2003	Benitec Australia, Ltd.	
	A12				
	A13				
	A14				
	A15				

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Number-Kind Code ² (if known)				
	B1	EP-1144623-B1	08/17/2000	Ribopharma AG		X Abstract Only
	B2	WO-01/75164-A2	10/11/2001	Tuschl et al.		
	B3	WO-02/055693-A2	07/18/2002	Kreutzer et al.		X Abstract Only
	B4	WO-02/44321-A2	06/06/2002	Tuschl et al.		
	B5	WO-03/006477-A1	01/23/2003	Zamore et al.		
	B6	WO-03/022052-A1	03/20/2003	Baltimore et al.		

Examiner

Date Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 2

of 5

Application Number	10/658,632
Filing Date	9/8/03
First Named Inventor	Alex Chenchik
Group Art Unit	1645
Examiner Name	Unknown
Attorney Docket Number	SBIO/0002/SB
Submission Date	February 17, 2004

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
	1	Michiels, Frits et al. "Arrayed adenoviral expression libraries for functional screening." <u>Nature Biotechnology</u> . November 2002 20: 1154-1157.	
	2	"BD Retro-X™ Q Vectors New self-inactivating vectors engineered to produce higher titers." <u>Clontechniques</u> . July 2002	
	3	Reddy, Ram et al. "The Capped U6 Small Nuclear RNA is Transcribed by RNA Polymerase III." <u>The Journal of Biological Chemistry</u> . January 1987 262(1): 75-81.	
	4	Singh, Ravinder et al. "Capping of Mammalian U6 Small Nuclear RNA in Vitro is Directed by a Conserved Stem-Loop and AUAUAC Sequence: Conversion of a Noncapped RNA into a Capped RNA." <u>Molecular and Cellular Biology</u> . March 1990 10(3): 939-946.	
	5	Jensen, Allan. "A combinatorial cell-based approach, CellScreen™, for target identification."	
	6	Ohkawa, Jun et al. "Control of the Functional Activity of an Antisense RNA by a Tetracycline-Responsive Derivative of the Human U6 snRNA Promoter."	
	7	Chen, Yili et al. "Development of RNA interference revertants in Trypanosoma brucei cell lines generated with a double stranded RNA expression construct driven by two opposing promoters." <u>Molecular & Biochemical Parasitology</u> . 2002 4078: 1-4 of 5.	
	8	Shi, Leming. "DNA Microarray (Genome Chip)" <u>DNA Microarray (Genome Chip) – Monitoring the Genome on a Chip</u> . 8 July 2003 < http://www.gene-chips.com/ > (pages 2, 11, 12, 13 and 15 of 19).	
	9	Tuschl, Thomas. "Expanding small RNA interference." <u>Nature Biotechnology</u> . May 2002 20: 446-448.	
	10	Piano, Fabio et al. "Gene Clustering Based on RNAi Phenotypes of Ovary-Enriched Genes in C. elegans." <u>Current Biology</u> . November 2002 12: 1959-1964.	
	11	Brazma, Alvis et al. "Gene expression data analysis." <u>FEBS Letters</u> . 2000 480: 17-24.	
	12	Tiscornia, Gustavo et al. "A general method for gene knockdown in mice by using lentiviral vectors expressing small interfering RNA." <u>PNAS Early Edition</u> . 1-5. < www.pnas.org/cgi/doi/10.1073/pnas.0437912100 >.	

Examiner

Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 3

of 5

Application Number	10/658,632
Filing Date	9/8/03
First Named Inventor	Alex Chenchik
Group Art Unit	1645
Examiner Name	Unknown
Attorney Docket Number	SBIO/0002/SB
Submission Date	February 17, 2004

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
	13	Roninson, Igor B. et al. "Genetic Suppressor Elements in the Characterization and Identification of Tumor Suppressor Genes." <u>Methods in Molecular Biology</u> . 222: 411-434.	
	14	Reed, Ken C. "High throughput target identification and validation <i>in vitro</i> and <i>in vivo</i> ." <u>RNAi 2003 Boston Meeting Proceedings</u> . May 2003	
	15	Kawasaki, Hiroaki et al. "Identification of genes that function in the TNF- α -mediated apoptotic pathway using randomized hybrid ribozyme libraries." <u>Nature Biotechnology</u> . April 2002 20: 376-380.	
	16	Wang, Zefeng et al. "Inhibition of <i>Trypanosoma brucei</i> Gene Expression by RNA Interference Using an Integratable Vector with Opposing T7 Promoters." <u>The Journal of Biological Chemistry</u> . December 2000 275(51): 40174-40179.	
	17	Qin, Xiao-Feng et al. "Inhibiting HIV-1 infection in human T cells by lentiviral-mediated delivery of small interfering RNA against CCR5." <u>PNAS</u> . January 2003 100(1): 183-188.	
	18	Walhout, Albertha J.M. et al. "Integrating Interactome, Phenome, and Transcriptome Mapping Data for the <i>C. elegans</i> Germline." <u>Current Biology</u> . November 2002 12: 1952-1958.	
	19	Famulok, Michael et al. "In vivo-applied functional RNAs as tools in proteomics and genomics research." <u>Trends in Biotechnology</u> . November 2002 20(11): 462-466.	
	20	Voorhoeve, P. Mathijs et al. "Knockdown stands up." <u>Trends in Biotechnology</u> . January 2003 21(1): 2-4.	
	21	Stewart, Sheila A. et al. "Lentivirus-delivered stable gene silencing by RNAi in primary cells." <u>RNA</u> . 2003 9:493-501.	
	22	Shi, Yang. "Mammalian RNAi for the masses." <u>Trends in Genetics</u> . January 2003 19(1): 9-12.	
	23	Shumyatsky, Gleb et al. "Methylphosphate cap structure increases the stability of 7SK, B2 AND U6 small RNAs in <i>Xenopus oocytes</i> ." <u>Nucleic Acids Research</u> . 1993 21(20): 4756-4761.	
	24	"Microarrays: Chipping Away at the Mysteries of Science and Medicine." <u>National Center for Biotechnology Information</u> . 1-12. < http://www.ncbi.nlm.nih.gov/About/primer/microarrays.html >.	

Examiner

Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Application Number	10/658,632
		Filing Date	9/8/03
		First Named Inventor	Alex Chenchik
		Group Art Unit	1645
		Examiner Name	Unknown
		Attorney Docket Number	SBIO/0002/SB
Sheet 4	of 5	Submission Date	February 17, 2004

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
	25	Singh, Ravinder et al. "γ-Monomethyl phosphate: A cap structure in spliceosomal U6 small nuclear RNA." <u>Proc. Natl. Acad. Sci.</u> November 1989 86: 8280-8283.	
	26	"pPUR." BD Biosciences. 10 June 2003 < http://www.clontech.com/techinfo/vectors/vectorsM-Q/pPUR.shtml >.	
	27	Barton, Gregory M. et al. "Retroviral delivery of small interfering RNA into primary cells." <u>PNAS</u> . November 2002 99(23): 14943-14945.	
	28	Ilves, Heini et al. "Retroviral vectors designed for targeted expression of RNA polymerase III-driven transcripts: a comparative study." <u>Gene</u> . 1996 171: 203-208.	
	29	Devroe, Eric et al. "Retrovirus-delivered siRNA." <u>BioMed Central</u> . August 2002 2: 15. < http://www.biomedcentral.com/1472-6750/2/15 >.	
	30	Hannon, Gregory J. "RNA interference." <u>Nature</u> . July 2002 418: 244-251.	
	31	Willis, Ian M. "RNA polymerase III: Genes, factors and transcriptional specificity." <u>Eur. J. Biochem</u> . 1993 212: 1-11.	
	32	Burke, Adrienne J. "Short Interfering Sensation." <u>Genome Technology</u> . May 2003: 36-44.	
	33	Kunkel, Gary R. et al. "Transcription of a human U6 small nuclear RNA gene <i>in vivo</i> withstands deletion of intragenic sequences but not of an upstream TATATA box." <u>Nucleic Acids Research</u> . 1989 17(18): 7371-7379.	
	34	Pfeller, Alexander et al. "Transgenesis by lentiviral vectors: Lack of gene silencing in mammalian embryonic stem cells and preimplantation embryos." <u>PNAS</u> . February 2002 99(4): 2140-2145.	
	35	Miyagishi, Makoto et al. "U6 promoter-driven siRNAs with four uridine 3' overhangs efficiently suppress targeted gene expression in mammalian cells." <u>Nature Biotechnology</u> . May 2002 19: 497-500.	
	36	Kunkel, Gary R. et al. "U6 small nuclear RNA is transcribed by RNA polymerase III." <u>Proc. Natl. Acad. Sci.</u> November 1986 83:8575-8579.	

Examiner	Date Considered
----------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Application Number	10/658,632
				Filing Date	9/8/03
				First Named Inventor	Alex Chenchik
				Group Art Unit	1645
				Examiner Name	Unknown
				Attorney Docket Number	SBIO/0002/SB
Sheet	5	of	5	Submission Date	February 17, 2004

[illegible]

Examiner	Date Considered
----------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.